

(No Model.)

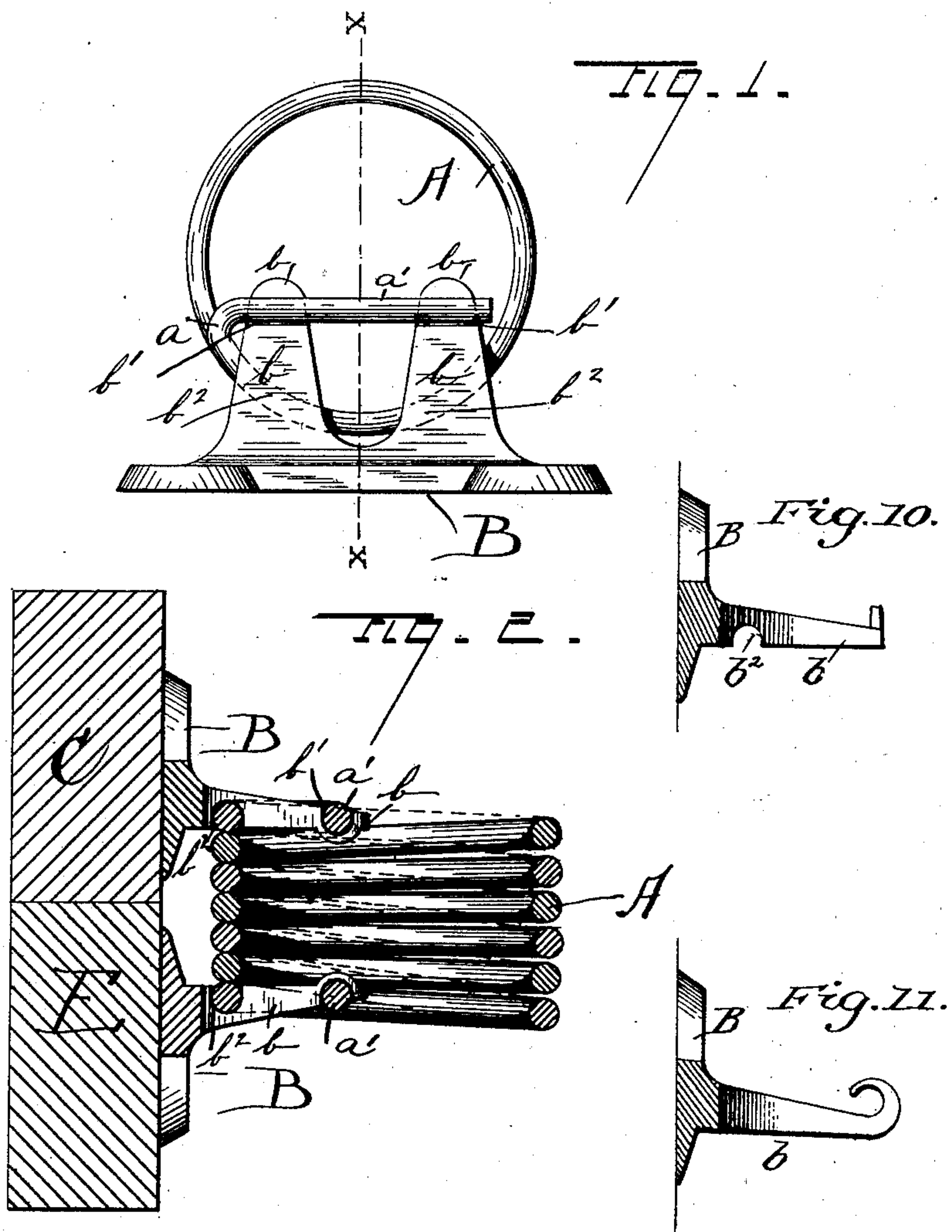
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W. I. BUNKER.

ATTACHMENT FOR ROCKING CHAIRS.

No. 341,448.

Patented May 11, 1886.



WITNESSES

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(No Model.)

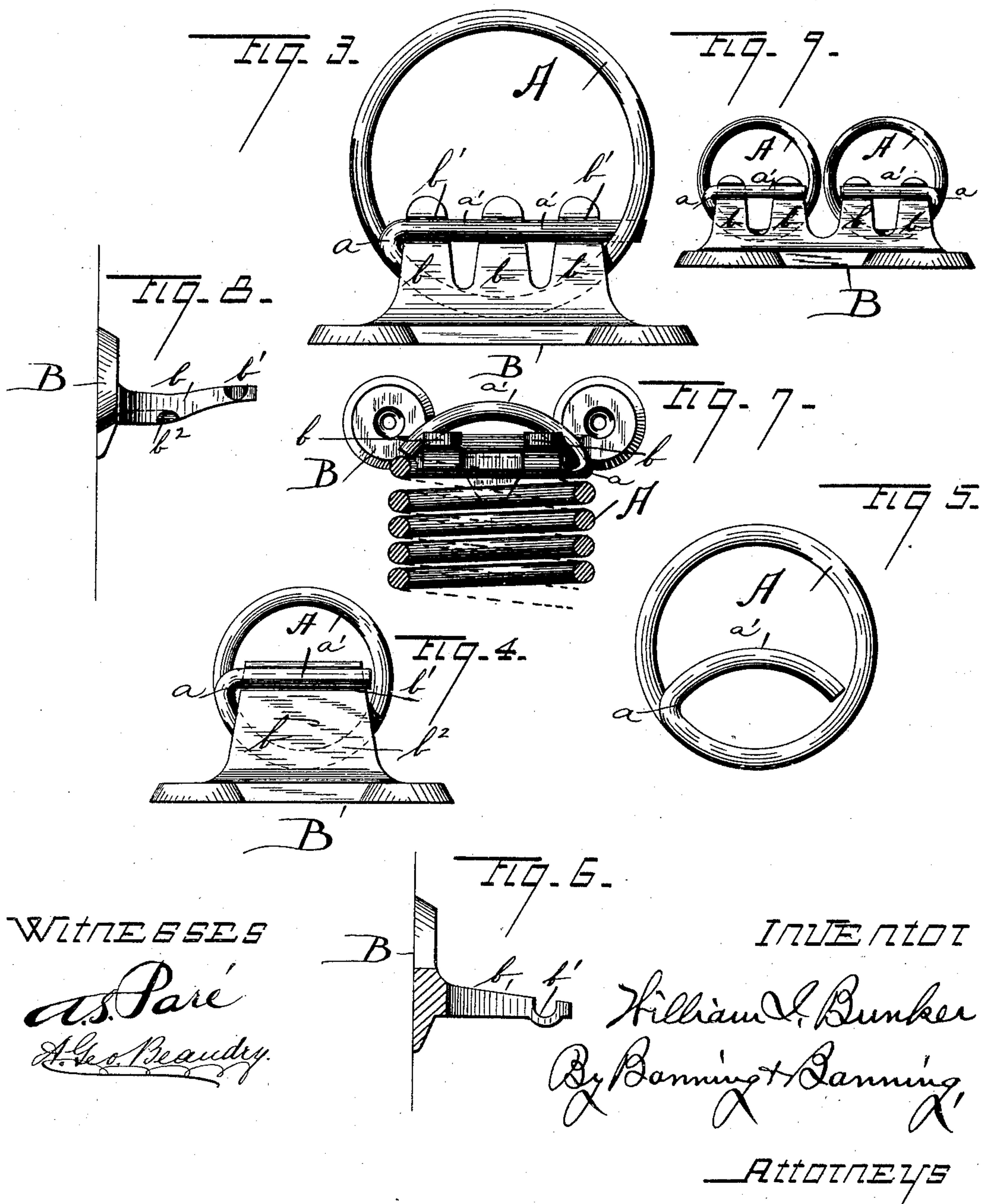
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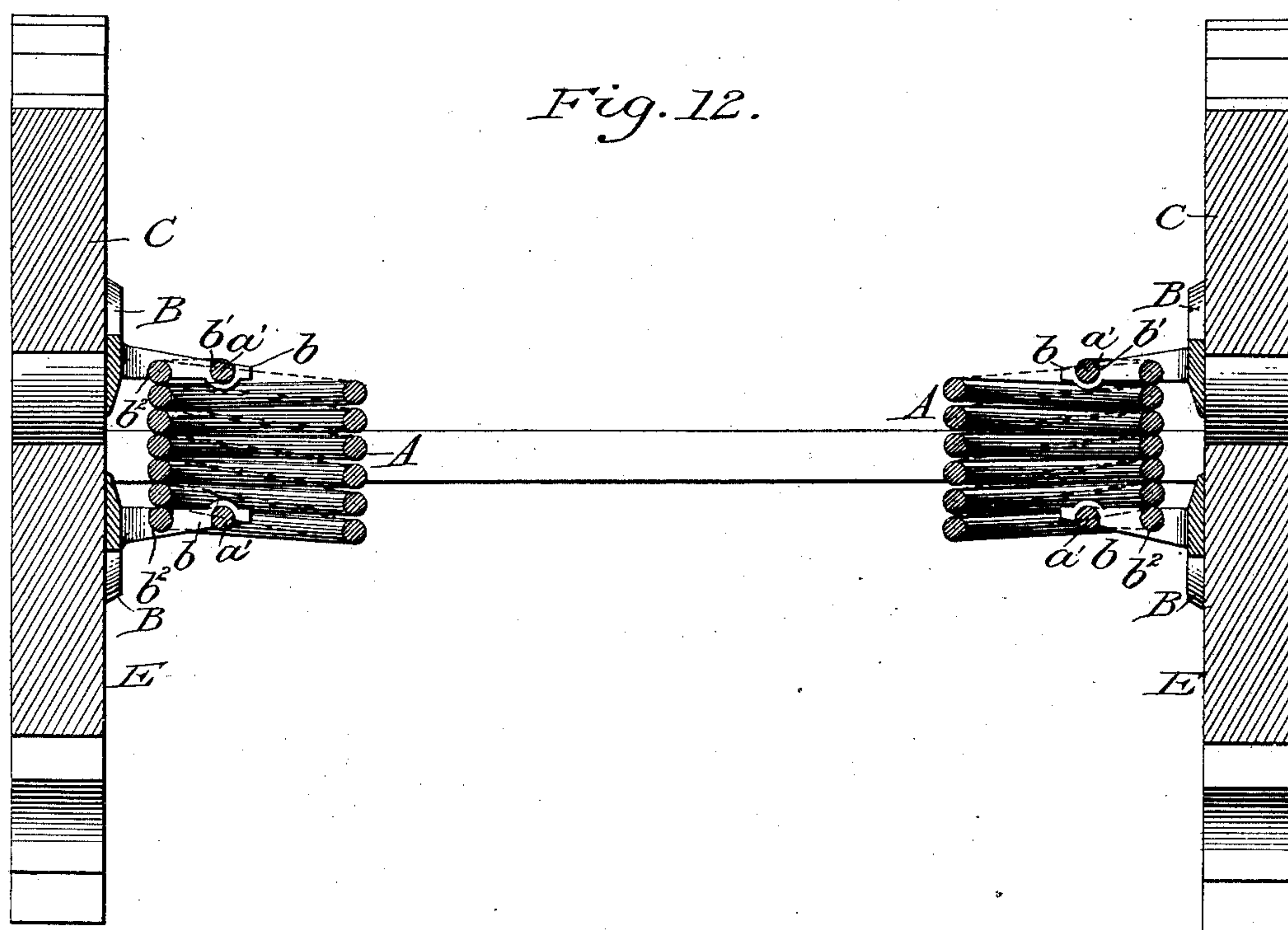
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ATTACHMENT FOR ROCKING-CHAIRS.

SPECIFICATION forming part of Letters Patent No. 341,448, dated May 11, 1886.

Application filed March 6, 1886. Serial No. 194,220. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM I. BUNKER, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Attachments for Rocking-Chairs, of which the following is a specification.

The object of my invention is to make a simple and economical spring attachment for platform rocking-chairs and other articles.

In the accompanying drawings, Figure 1 is a plan view of my improved spring and its attaching-brackets. Fig. 2 is a vertical sectional view of the same, taken in line *xx* of Fig. 1, and showing the brackets secured to a rocker and base-rail of a platform rocking-chair; and Figs. 3 to 11 illustrate modifications. Fig. 12 is a front view showing my improved attachment applied to the rockers and base-rails of an ordinary platform rocking-chair, one spring at the inside of each rocker and base-rail.

A is the spring, B the brackets, and C a rocker, and E a base-rail, of a platform rocking-chair.

In constructing my improved spring I make a short turn or bend, *a*, in the wire forming the last coil at each end, and then pass the bent portion *a'* across or partially across the open end of the spring, preferably between the side to which the bracket is attached and a line drawn across the center of the spring lengthwise of the chair, this bent portion being on substantially the same plane as the last coil, and preferably extending entirely across the open end of the spring. The point at which the short bend in the wire is made must of course depend somewhat on the size and character of the spring. If the bracket hereinafter described be adapted for bending and passing the wire at a point about a third across the spring from the side nearest to the rocker and base-rail, as shown, for instance, in Fig. 1, it will be apparent that if the spring is made larger or smaller the position of the bend should be changed relatively, so that in a large spring it may not be more than one-quarter of the distance across, (see Fig. 3,) while in a small one it may be a full half, or directly across the center of the spring. (See Fig. 4.) It is also apparent that instead of extending

directly across the open end of the spring the bent portion may continue in a somewhat circular direction, (see Fig. 5,) and, if so desired, the end of the wire forming the bent portion may be passed under or partially under the last coil, or between the last two coils, (see Fig. 3,) or otherwise fastened and held in place.

I construct my improved bracket preferably with two projecting portions, *b*, extending substantially at right angles from the main plate, intended to be secured to the rockers and base-rails of the chair; but it is apparent that only one or even three such projecting portions may be used, depending somewhat on the size of the spring. In my preferred form these projecting portions of the bracket are provided with grooves *b'* *b''*, the former of which is adapted to receive the bent portion of the spring, and the latter to fit over its last coil at the point or points where the projecting portion or portions come in contact therewith when the bracket and spring are secured together; but it is apparent that the groove *b''* may be omitted and the bracket have a plain surface at the point where it thus comes in contact with the spring. (See Fig. 6.)

In Fig. 7, which is a vertical cross-section taken in a line parallel with the rocker and base-rail, I have shown a modification, in which, instead of passing directly across the open end of the spring in substantially the same plane as the last coil, the bent portion is somewhat looped, or, in other words, bent or curved away from the body of the coils. As shown in this figure, the bent portion passes through the grooves *b* at an angle instead of lying flat therein, as in the other figures; but this is not necessary. The bracket in this case is also changed to adapt it to the loop of the bent portion—that is, the ends of its projecting portion farthest from the main plate extend upwardly (see Fig. 8) as far as may be necessary to receive and hold the looped bent portion.

It is of course apparent that my invention may be used in connection with a double spring, or two springs placed side by side, (see Fig. 9,) as well as with a single spring, and in such case all the variations or forms above mentioned will be equally applicable.

Other variations in form will readily suggest themselves—as, for instance, the projecting portions of the bracket may be provided with other means of receiving and holding the bent portion of the spring than grooves, technically, such as upwardly-projecting studs or shoulders, (see Fig. 10,) or an upward bend of the outer end of the projecting portion proper. (See Fig. 11.)

The bracket and spring may be secured together either before or after the brackets are fastened to the rockers and base-rails of the chair. To secure them together I pass the projecting portions of the bracket across the side of the spring intended to be nearest to the rocker and base-rail, and the ends thereof under the bent portion extending across the body of the spring. The bent portion then fitting into the groove b' , and the upper edge of the last coil into the groove b'' , the seat and base parts of the chair will be at once firmly and rigidly secured together by the drawing tension of the spring.

Some of the advantages of having the bent portion pass across the open end of the spring in substantially the same plane as its last coil are, that it shortens the bent portion, and thus saves material; that it enables the short bend to be made in the same general direction as the coils, thus obviating an abrupt bend in a different direction, tending to destroy the cohesion of the metal; that it enables the end of the bent portion to be inserted between the last two coils, when desired to be so secured, and that it makes the spring shorter, and thus adapts it to chairs having narrow rockers and base-rails, as is frequently the case in rattan or bent-wood goods.

Some of the advantages of having the bent portion not more than half-way across the open end of the spring from the side nearest to the rocker and base-rail are, that it enables the shortening of the projecting portion of the bracket, thus saving material; that the spring is more firmly and rigidly clamped and held in the casting the nearer the bent portion is to the side at which the bracket is secured, the drawing tension of the body of the spring in such case acting more powerfully; that it obviates any objectionable unevenness in the stretching or extending of the coils of the spring, and, speaking generally and with reference to practical effect, that it enables the same bracket to be used on different-sized springs having their bent portions the same distance from the rockers and base-rails.

I have spoken of the "bent portion" of the spring as including all of the last coil after the point at which it takes its short bend; but as the greater part of this portion may be perfectly straight I of course have not intended to use this term in any strict or technical sense. Nor have I intended to mean, when speaking of the projecting portion of the bracket as passing "under" the bent portion or "over" the last coil, or as sometimes extending "upwardly," that they must necessarily do this

in a technical sense, for while this is their position when the bracket is at the upper end of the spring it may not be strictly so when the bracket is secured to the lower end and fastened to the base-rail.

I claim—

1. In combination with the rockers and base-rails of a platform rocking-chair, two broad, short, stiff, spiral springs and brackets for securing the same to the rockers and base-rails, each of the springs having the wire forming its last coil at each end bent and passed crosswise of its open end, and each of the brackets having a projecting portion adapted to press against the under side of the bent portion and the upper side of the last coil of the spring, whereby the seat and base parts of the chair are rigidly secured and held together by the drawing tension of the springs, substantially as described.

2. In combination with the rockers and base-rails of a platform rocking-chair, two broad, short, stiff, spiral springs and brackets for securing the same to the rockers and base-rails, each of the springs having the wire forming its last coil at each end bent and passed crosswise of its open end in substantially the same plane as its last coil, and each of the brackets having a projecting portion provided with a groove at its outer end to receive the bent portion of the spring, whereby the seat and base parts of the chair are rigidly secured and held together by the drawing tension of the springs, substantially as described.

3. In combination with the rockers and base-rails of a platform rocking-chair, two broad, short, stiff, spiral springs and brackets for securing the same to the rockers and base-rails, each of the springs having the wire forming its last coil at each end bent and passed crosswise of its open end in substantially the same plane as its last coil, and in a line not more than half-way across the open end of the spring from the side nearest to the rocker and base-rail, and each of the brackets having a projecting portion provided with a groove to receive the bent portion of the spring, whereby the seat and base parts of the chair are rigidly secured and held together by the drawing tension of the springs, substantially as described.

4. In combination with the rockers and base-rails of a platform rocking-chair, two broad, short, stiff, spiral springs and brackets for securing the same to the rockers and base-rails, each of the springs having the wire forming its last coil at each end bent and passed crosswise of its open end in substantially the same plane as its last coil, and in a line not more than half-way across the open end of the spring from the side nearest to the rocker and base-rail, and each of the brackets having two projecting portions provided, respectively, with an upper groove at their outer ends to receive the bent portion of the spring, and a lower groove near the main plate to fit over the last coil of the spring, whereby the seat and base

parts of the chair are rigidly secured and held together by the drawing tension of the springs, substantially as described.

5 The combination of a broad, short, stiff, close-coiled, spiral spring and two attaching-brackets, the spring having the wire forming its last coil at each end bent and passed cross-wise of its open end in a line not more than half-way across the open end of the spring
10 from the side nearest to the brackets, and each of the brackets having a projecting portion

provided with a groove at its outer end to receive the bent portion of the spring, and an under surface near the main plate to fit the last coil thereof, whereby the brackets and
15 spring may be rigidly secured together and a leverage obtained at one side of the spring when in use, substantially as described.

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Witnesses:

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GEORGE C. COOK.